

MANUFACTURED BY:

GENERAL ELECTRIC CO.
SILICONE PRODUCTS DIV
WATERFORD, NY 12188

EMERGENCY TELEPHONE:

(518) 237-3330 (24 HRS)

SUPPLIED BY:

GENERAL ELECTRIC CO.
SILICONE PRODUCTS DIV
WATERFORD, NY 12188

(518) 237-3330 (24 HRS)

REVISED: 10/25/88

PREPARER: DA POLSINELLI

*** I PRODUCT IDENTIFICATION ***

PRODUCT IDENTIFICATION: PSA529

CHEMICAL FAMILY

SILICONE RESIN SOLUTION

CHEMICAL NAME: SILICONE RESIN IN TOLUENE

FORMULA: MIXTURE

*** II PRODUCT COMPONENTS ***

PRODUCT COMPOSITION	APPROX. ACGIH		OSHA		CAS REG
	WGT. %	TLV	PEL	UNITS	NO.
A. HAZARDOUS					
TOLUENE	30-60	100	200	PPM	108-88-3*
BENZENE	<0.1	10	1	PPM	71-43-2*
B. NON-HAZARDOUS					

FORMULATION INFORMATION:

THIS SPACE RESERVED FOR SPECIAL USE.

*** III PHYSICAL DATA ***

**PRODUCT INFORMATION

BOILING POINT	: 232 (F) 111 (C)	% VOLATILE BY VOLUME:45
VAPOR PRESSURE(20 C):	22 MM HG	EVAPORATION RATE :1.9
VAPOR DENSITY(AIR=1):	3.2	(BUTYL ACETATE=1)
FREEZING POINT	: NA (F) NA (C)	SPECIFIC GRAVITY :.99
MELTING POINT	: NA (F) NA (C)	(WATER=1)
PHYSICAL STATE	: LIQUID	DENSITY :982.6 KG/M3
ODOR	: AROMATIC	ACID/ALKALINITY :<15 PPM MEG/G
COLOR	: CLEAR	PH :UNKNOWN
ODOR THRESHOLD	: UNK (PPM)	
SOLUBILITY IN WATER(20C): NEGLIGIBLE		
SOLUBILITY IN ORGANIC SOLVENT: SOLUBLE, TOLUENE		
(STATE SOLVENT)		

*** IV FIRE AND EXPLOSION DATA ***

FLASH PT: 35 (F) 1.6 (C) BY TCC. IGNITION TEMP: 997 (F) 536 (C)
FLAMMABLE LIMITS IN AIR(%): LOWER 1.2 UPPER 7.0
SENSITIVITY TO MECHANICAL IMPACT (Y/N): N
SENSITIVITY TO STATIC DISCHARGE:
SENSITIVITY TO STATIC DISCHARGE IS EXPECTED; MATERIAL HAS A
FLASH POINT BELOW 200 F.
EXTINGUISHING MEDIA:
ALL STANDARD FIREFIGHTING MEDIA
ECIAL FIREFIGHTING PROCEDURES:
FLAMMABLE.
WEAR RESPIRATORY PROTECTION IF IN A CONFINED AREA.

*** V REACTIVITY DATA ***

STABILITY: HAZARDOUS:
X STABLE UNSTABLE POLYMERIZATION WILL NOT OCCUR
HAZARDOUS DECOMPOSITION/COMBUSTION PRODUCTS:
CARBON MONOXIDE.
CARBON DIOXIDE.
SILICON DIOXIDE.
INCOMPATIBILITY (MATERIALS TO AVOID):
CONTACT WITH OXIDIZING AGENTS.
CONDITIONS TO AVOID:
KEEP AWAY FROM HEAT, SPARKS AND FLAME.
AVOID ANY SOURCE OF IGNITION.

*** VI HEALTH HAZARD DATA ***

ACUTE SIGNS/EFFECTS OF OVEREXPOSURE:
INGESTION:
HARMFUL IF SWALLOWED.
CAUSES VOMITING, NAUSEA, AND DIARRHEA
SKIN CONTACT:
CAUSES DRYING OF THE SKIN.

INHALATION:

EXCESSIVE INHALATION CAUSES HEADACHE, DIZZINESS, NAUSEA AND
INCOORDINATION.

HARMFUL IF INHALED.

EYE CONTACT:

CAUSES SEVERE EYE IRRITATION.

MEDICAL CONDITIONS AGGRAVATED:

RESPIRATORY

LIVER, KIDNEY

DERMAL AILMENTS.

ALCOHOL CONSUMPTION PROBLEMS.

OTHER:

NONE KNOWN.

CHRONIC EFFECTS OF OVEREXPOSURE:

DERMATITIS.

RESPIRATORY AILMENTS.

LIVER AND KIDNEY DAMAGE.

EMERGENCY AND FIRST AID PROCEDURES:

INGESTION:

IF SWALLOWED DO NOT INDUCE VOMITING, GIVE LARGE QUANTITIES
OF WATER TO DRINK AND GET MEDICAL ATTENTION, NEVER
GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IN:

REMOVE CONTAMINATED CLOTHING AND LAUNDER BEFORE REUSE.

WASH WITH SOAP AND WATER.

GET MEDICAL ATTENTION IF IRRITATION PERSISTS.

INHALATION:

IF INHALED, REMOVE TO FRESH AIR, IF NOT BREATHING GIVE ARTIFI-
CIAL RESPIRATION, PREFERABLY MOUTH-TO MOUTH. IF BREATHING IS
DIFFICULT GIVE OXYGEN. GET MEDICAL ATTENTION.

EYES:

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER
FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION IF IRRITATION
PERSISTS.

NOTE TO PHYSICIAN:

NONE KNOWN.

TOXICITY:

ACUTE ORAL LD50:

TOLUENE

5000 (RAT)

MG/KG

ACUTE DERMAL LD50:

14,000 (RBT)

MG/KG

ACUTE INHALATION LC50:

5320 PPM 4/HR(RAT)

OTHER:

NONE.

AMES TEST:

UNKNOWN

TOXICITY:

BENZENE

ACUTE ORAL LD50:	3,800 (RAT)	MG/KG
ACUTE DERMAL LD50:	NONE FOUND	MG/KG
ACUTE INHALATION LC50:	10,000 PPM/7HR(RAT)	
OTHER:	NONE.	

AMES TEST: UNKNOWN

PRINCIPAL ROUTES OF EXPOSURE:

ORAL.
DERMAL - SKIN.
EYES.
INHALATION.

THIS PRODUCT OR ONE OF ITS INGREDIENTS PRESENT 0.1% OR MORE
IS NOT LISTED AS A CARCINOGEN OR SUSPECTED CARCINOGEN BY
NTP, IARC, OR OSHA
PRODUCTS/INGREDIENTS

THIS SPACE RESERVED FOR SPECIAL USE.

PREVENTATIVE MEASURES (SECTIONS VII, VIII, IX)

*** VII SPECIAL PROTECTIVE EQUIPMENT ***

RESPIRATORY PROTECTION:

USE IN A WELL VENTILATED AREA.
USE APPROVED NIOSH RESPIRATORY PROTECTION IF TLV EXCEEDED.....
OR OVER EXPOSURE IS LIKELY.

PROTECTIVE GLOVES:

RUBBER GLOVES.

EYE AND FACE PROTECTION:

SAFETY GLASSES.
MONOGOGGLES.

OTHER PROTECTIVE EQUIPMENT:

RUBBER APRON.
WEAR EYE PROTECTION AND PROTECTIVE CLOTHING.

VENTILATION:

USE ONLY IN WELL VENTILATED AREA.
MECHANICAL VENTILATION.

*** VIII SPILL, LEAK AND DISPOSAL PROCEDURES ***

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

WIPE, SCRAPE OR SOAK UP IN AN INERT MATERIAL AND PUT IN A
CONTAINER FOR DISPOSAL.
WEAR PROPER PROTECTIVE EQUIPMENT AS SPECIFIED IN THE PROTECTIVE
EQUIPMENT SECTION.
REMOVE SOURCES OF IGNITION.
WARN OTHER WORKERS OF SPILL.
INCREASE AREA VENTILATION.

DISPOSAL METHOD:

DISPOSAL SHOULD BE MADE IN ACCORDANCE WITH FEDERAL, STATE AND

LOCAL REGULATIONS.
INCINERATION RECOMMENDED IN APPROVED INCINERATOR ACCORDING TO
FEDERAL, STATE, AND LOCAL REGULATIONS.

*** IX SPECIAL PRECAUTIONS ***

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

USE GROUND STRAP.
STORE UPRIGHT IN A COOL PLACE BELOW 30'C (85'F).
KEEP CONTAINER CLOSED WHEN NOT IN USE.
AVOID BREATHING VAPORS, IF EXPOSED TO HIGH VAPOR CONCENTRATION,
LEAVE AREA AT ONCE.
AVOID CONTACT WITH SKIN AND EYES.
USE ONLY IN A WELL VENTILATED AREA.
WARNING! FLAMMABLE.
DO NOT INHALE VAPORS.

ENGINEERING CONTROLS:

EXHAUST VENTILATION
SHOWERS.
EYEWASH STATIONS.
USE IN A WELL VENTILATED AREA.

*** X SHIPPING AND REGULATORY CLASSIFICATION DATA ***

T SHIPPING NAME: RESIN SOLUTION (CONTAINS TOLUENE)
DOT HAZARD CLASS: FLAMMABLE LIQUID
DOT LABELS(S): FLAMMABLE LIQUID
UN/NA NUMBER: UN1866
PLACARDS:
FLAMMABLE LIQUID
EXPORT:
RESIN SOLUTION (CONTAINS TOLUENE), FLAMMABLE LIQUID, UN1866, CLASS 3.2,
PACKAGING GROUP II, IMDG PAGE 3105,3153.

EPA HAZARD WASTE: D001, IGNITIBLE
SARA HAZARD CLASS:

TO BE DETERMINED

WHMIS HAZARD CLASS:

B2 FLAMMABLE LIQUIDS
D2B TOXIC MATERIALS

CPSC CLASSIFICATION: NA

TRANSPORTATION CLASS: 3.2 FLAMMABLE
RID (OCTI) FLAMMABLE
ADR (ECE) 3,2301,1A FLAMMABLE
RAR (IATA) FLAMMABLE

NFPA/HMIS CLASSIFICATION FLAMMABILITY 3 , REACTIVITY 0 , HEALTH 2

ADDITIONAL INFORMATION:

THIS PRODUCT OR ITS COMPONENTS ARE ON THE EUROPEAN INVENTORY OF
EXISTING COMMERCIAL CHEMICALS (EINECS).....

.....
THESE DATA ARE OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT
AS A PRODUCT SPECIFICATION. NO WARRANTY, EITHER EXPRESSED OR
IMPLIED, IS MADE. THE RECOMMENDED HANDLING PROCEDURES ARE
BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD
REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTENT OF THE
INTENDED USE.....

.....
THIS PRODUCT OR ITS COMPONENTS ARE ON THE AUSTRALIAN INVENTORY
(ACQIN).....

.....
THIS PRODUCT CONTAINS A SUBSTANCE(S) THAT IS (ARE) ON THE LIST
OF TOXIC CHEMICALS SUBJECT TO SECTION 313 OF THE SUPERFUND
AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA). THIS SUB-
STANCE MAY BE SUBJECT TO AN ANNUAL SUBMISSION OF A TOXIC
CHEMICAL RELEASE FORM. SUCH SUBSTANCE IF PRESENT AT LESS THAN
ONE PERCENT, IS NOT LISTED UNDER PRODUCT COMPOSITION IN SECTION
II.....

C = CEILING LIMIT	NEGL = NEGLIGIBLE
EST= ESTIMATED	NF = NONE FOUND
NA = NOT APPLICABLE	UNKN = UNKNOWN
NE = NONE ESTABLISHED	REC = RECOMMENDED
ND = NONE DETERMINED	V = RECOMM. BY VENDOR
BY-PRODUCT = REACTION BY- PRODUCT, TSCA INVENTORY	SKN = SKIN
STATUS NOT REQUIRED UNDER 40 CFR PART 720.30(H-2)	TS = TRADE SECRET
	R = RECOMMENDED
	MST = MIST

.....
AS A SERVICE TO ITS CUSTOMERS, GE SILICONES DISCLOSES IN THE
MSDS FOR EACH PRODUCT THE PRESENCE OF EXTREMELY HAZARDOUS
SUBSTANCES AT 1% OR GREATER IN THE TOTAL COMPOSITION(0.1% FOR
CARCINOGENIC SUBSTANCES). ALL KNOWN TOXIC CHEMICALS AS DEFINED
BY SARA ARE DISCLOSED REGARDLESS OF THE AMOUNT PRESENT IN THE
COMPOSITION. IF THERE IS NO ENTRY FOUND IN THIS SECTION OF THE
MSDS, THERE ARE NO TOXIC CHEMICALS OR EXTREMELY HAZARDOUS SUB-
STANCES MEETING THE ABOVE CRITERIA PRESENT AS DEFINED BY THE
LATEST AVAILABLE LIST.....

.....
THIS PRODUCT CONTAINS A MATERIAL THAT IS ON THE CALIFORNIA
PROPOSITION 65 LIST OF CHEMICALS.
WARNING! THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF
CALIFORNIA TO CAUSE CANCER.....
.....

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MATERIAL SAFETY DATA SHEET

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SRC18MANUFACTURED BY:
GENERAL ELECTRIC CO.
SILICONE PRODUCTS DIV.
WATERFORD, NY 12188EMERGENCY TELEPHONE (24 HRS)
(518) 237-3330
REVISED: 10/21/85
PREPARER: DA POLSINELLI

***** I PRODUCT IDENTIFICATION *****

PRODUCT IDENTIFICATION SRC18 CHEMICAL FAMILY: SILANE
CHEMICAL NAME: AMINOPROPYLTRIETHOXY-SILANE FORMULA: $\text{NH}_2(\text{CH}_2)_3\text{Si}(\text{OC}_2\text{H}_5)_3$

***** II PRODUCT COMPONENTS *****

PRODUCT COMPOSITION	APPROX. %	ACGIH TLV	OSHA PEL	UNITS	CAS REG NO.
A. HAZARDOUS AMINOPROPYLTRIETHOXY-SILANE	>98	NF	NF	NA	919-30-2*
B. NON-HAZARDOUS					
**PRODUCT INFORMATION	NA	NA	NA	NA	NA

***** III PHYSICAL DATA *****

**PRODUCT INFORMATION

BOILING POINT 423 (F) 217 (C)
PHYSICAL STATE LIQUID
VAPOR PRESSURE (20 C) 10 MM HG
ODOR AMINO ODOR
VAPOR DENSITY (AIR=1) UNKN
COLOR COLORLESS
SOLUBILITY IN WATER (20 C) REACTS PH 7
SOLUBILITY IN ORGANIC SOLVENT ACIDITY/ALKALINITY ESS. NEUT. MEG/G
(STATE SOLVENT) UNKNOWN
FREEZING POINT NA (F) NA (C) DENSITY 943 KG/M3
MELTING POINT NA (F) NA (C) SPECIFIC GRAVITY (WATER=1) 0.943
% VOLATILE BY VOLUME <1 EVAPORATION RATE (BUTYL ACETATE=1) <1

***** IV FIRE AND EXPLOSION DATA *****

FLASH POINT 220 (F) 104 (C) BY TOC. IGNITION TEMP UNKN (F) UNKN (C)
FLAMMABLE LIMITS IN AIR (%) LOWER UNKN UPPER UNKN
EXTINGUISHING MEDIA
CARBON DIOXIDE
DRY CHEMICAL
SODIUM CHLORIDE
FOAM
WATER MIST
SPECIAL FIREFIGHTING PROCEDURES
NONE KNOWN

***** V REACTIVITY DATA *****

STABLE X STABLE UNSTABLE
HAZARDOUS POLYMERIZATION NONE NOT OCCUR
HAZARDOUS DECOMPOSITION PRODUCTS

CARBON DIOXIDE.
SILICON DIOXIDE.
ETHANOL.

INCOMPATIBILITY (MATERIALS TO AVOID):

AVOID CONTACT WITH ACIDIC, BASIC OR OXIDIZING AGENTS.

CONDITIONS TO AVOID:

KEEP AWAY FROM ANY CONTACT WITH WATER.

***** VI HEALTH HAZARD DATA *****

ACUTE SIGNS/EFFECTS OF OVEREXPOSURE:

INGESTION:

HARMFUL IF SWALLOWED.

SKIN CONTACT:

MAY CAUSE MODERATE SKIN IRRITATION.

INHALATION:

CAUSES MILD RESPIRATORY IRRITATION.

EYE CONTACT:

CAUSES SEVERE EYE IRRITATION MAY DAMAGE TISSUE.

MEDICAL CONDITIONS AGGRAVATED:

NONE KNOWN.

OTHER:

NONE KNOWN.

CHRONIC EFFECTS OF OVEREXPOSURE:

NONE KNOWN.

EMERGENCY AND FIRST AID PROCEDURES:

INGESTION:

IF SWALLOWED DO NOT INDUCE VOMITING, GIVE LARGE QUANTITIES
OF WATER TO DRINK AND GET MEDICAL ATTENTION, NEVER
GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

SKIN:

REMOVE CONTAMINATED CLOTHING AND LAUNDRY BEFORE REUSE.

WASH WITH SOAP AND WATER.

GET MEDICAL ATTENTION IF IRRITATION PERSISTS.

INHALATION:

MOVE PERSON TO FRESH AIR.

EYES:

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLenty OF WATER
FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION.

NOTE TO PHYSICIAN:

NONE KNOWN.

TOXICITY:

***** PRODUCT INFORMATION *****

ACUTE ORAL LD50 1780 (RAT)

MG/KG

ACUTE DERMAL LD50 14,000 (RBT)

MG/KG

ACUTE INHALATION LC50 NONE FOUND

OTHER:

SEVERE EYE IRRITATION (RBT)

AMES TEST:

UNKNOWN

PRINCIPAL ROUTES OF EXPOSURE:

ORAL

EYES

PRODUCTS/INGREDIENTS

NONE KNOWN

***** VII SPECIAL PROTECTIVE EQUIPMENT *****

RESPIRATORY PROTECTION:
USE IN A WELL VENTILATED AREA.
PROTECTIVE GLOVES:
RUBBER GLOVES.
EYE AND FACE PROTECTION:
MONOCOGGLES.
FACE SHIELD.
OTHER PROTECTIVE EQUIPMENT:
WEAR EYE PROTECTION AND PROTECTIVE CLOTHING.
VENTILATION:
USE ONLY IN WELL VENTILATED AREA.

*** VIII SPILL, LEAK AND DISPOSAL PROCEDURES ***

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
WIPE, SCRAPE OR SOAK UP IN AN INERT MATERIAL AND PUT IN A
CONTAINER FOR DISPOSAL.
WEAR PROPER PROTECTIVE EQUIPMENT AS SPECIFIED IN THE PROTECTIVE
EQUIPMENT SECTION.
WARN OTHER WORKERS OF SPILL.
INCREASE AREA VENTILATION.

DISPOSAL METHOD:
DISPOSAL SHOULD BE MADE IN ACCORDANCE WITH FEDERAL, STATE AND
LOCAL REGULATIONS.
INCINERATION RECOMMENDED.

***** IX SPECIAL PRECAUTIONS *****

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
AVOID CONTACT WITH SKIN AND EYES.
USE ONLY IN A WELL VENTILATED AREA.
CAUTION!

ENGINEERING CONTROLS:
SHOWERS.
EYEWASH STATIONS.
USE IN A WELL VENTILATED AREA.

** X SHIPPING AND REGULATORY CLASSIFICATION DATA **

UN/NA NUMBER: NA

DOT SHIPPING NAME: NA
DOT HAZARD CLASS: NA
DOT LABEL(S): NA
EPA HAZARD WASTE: NA
OSHA HAZARD CLASS: NA
CPSC CLASSIFICATION: NA
TRANSPORTATION CLASS: IMD NA
RID (OCT1): NA
ADR (ECE): NA
RAR (IATA): NA

NEPA/HMIS CLASSIFICATION: FLAMMABILITY 0, REACTIVITY 0, HEALTH 2

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